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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,630	06/01/2001	Hiroimi Watanabe	NITT.0017	9005

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REED SMITH LLP
3110 FAIRVIEW PARK DRIVE, SUITE 1400
FALLS CHURCH, VA 22042

EXAMINER

MYERS, PAUL R

ART UNIT PAPER NUMBER

2112

DATE MAILED: 04/27/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/870,630

Applicant(s)

WATANABE ET AL.

Examiner

Paul R. Myers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/01/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 and 18-28 is/are rejected.
- 7) ☒ Claim(s) 5 and 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 6, 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Elabd PN 6,526,462.

In regards to claims 1, 6, 18-20: Elabd teaches a signal processing circuit having a data input-output circuit (any one of 18, 20 or 22), a microprocessor (4), a dedicated processing circuit (2), a local memory (one of 32 or 34), and a memory access control circuit (30) interconnected over a bus (24), wherein: said bus includes a system bus (System Bus) that is connected to said data input-output circuit (18, 20, 22), said microprocessor (4), said dedicated processing circuit (2), and said memory access control circuit (30), and a local memory bus (either the bus connecting 32 to the MT MMS or 34 to the MT MMS) that is connected to said

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local memory (32 or 34); first (54), second (50), and third (50) connection circuits are connected between said system bus (24) and said local memory bus, between a first local bus (25a) included in said dedicated processing circuit (2) and said local memory bus, and between a second local bus (25c or 25d or 25e) included in said data input-output circuit (18, 20, or 22) and said local memory bus; and said memory access control circuit (30) controls the connections of said first, second and third connection circuits (Column 6 lines 5-33).

In regards to claim 2: Elabd teaches the priorities are configurable including round-robin, pseudo-random or fixed (Column 8 line 67 to Column 9 line 4)

In regards to claim 3: Elabd teaches issuing interrupts to the processor (via an interrupt controller) from I/O devices.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elabd PN 6,526,462 in view of Birzele et al PN 4,271,518.

In regards to claims 4, 11-14: Elabd teaches serial input-output. Elabd however teaches the memory controller handling the serial input-output. Elabd does not teach the serial input-output generating an interrupt and the processor handling the serial input-output. Birzele et al teaches a serial I/O which generates an interrupt to the processor for handling the I/O. It would

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have been obvious to a person of ordinary skill in the art at the time of the invention to handle serial I/O in the manner of Birzele et al because this would have freed the MT MMS from this task.

5. Claims 7-8, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elabd PN 6,526,462 in view of Chen et al PN 6,263,022.

In regards to claims 7, 21: Elabd teaches the claimed input/output circuit and a dedicated processor that is a digital signal processor which are commonly video processors. Elabd also teaches the DSP handling streaming data however Elabd does expressly state the data is video. Streaming data is either audio, video, or a combination thereof. Chen et al teaches the use of a streaming video I/O and a video processing including encoding/decoding, a discrete cosine transform and motion estimation and compensation. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have Elabd's I/O and DSP handle video as performed by Chen et al because this would have prevented Elabd's streaming data from being restricted to audio.

In regards to claims 8, 22: Elabd teaches the data including streaming data which is handled in real-time.

6. Claims 9-10, 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elabd PN 6,526,462 and Chen et al PN 6,263,022 and further in view of Birzele et al PN 4,271,518.

In regards to claims 9-10, 23-28: Elabd teaches serial input-output. Elabd however teaches the memory controller handling the serial input-output. Elabd does not teach the serial input-output generating an interrupt and the processor handling the serial input-output. Birzele et al teaches a serial I/O which generates an interrupt to the processor for handling the I/O. It

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would have been obvious to a person of ordinary skill in the art at the time of the invention to handle serial I/O in the manner of Birzele et al because this would have freed the MT MMS from this task.

Allowable Subject Matter

7. Claims 5, 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul R. Myers whose telephone number is 703 305 9656. The examiner can normally be reached on Mon-Thur 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703 305 4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PRM
April 22, 2004

PAUL R. MYERS
PRIMARY EXAMINER